ABSTRACT OF THE DISCLOSURE

Obfuscating an application program comprises reading an application program comprising code, determining multiple dispatch tables associated with the application program, transforming the application program into application program code configured to utilize the dispatch tables during application program execution to determine the location of instruction implementation methods to be executed based at least in part on a current instruction counter value, and sending the application program code. Executing an obfuscated application program comprises receiving an obfuscated application program comprising at least one instruction opcode value encoded using one of multiple instruction set opcode value encoding schemes, receiving an application program instruction corresponding to a current instruction counter value, selecting an instruction dispatch table based at least in part on the current instruction counter value, and executing the application program instruction using the selected instruction dispatch table.